

WHAT IS CLAIMED IS:

1. A black reference data calculation method for calculating black reference data of a plurality of pixels constituting an image pick-up system for each pixel, the method comprising:

5 a light shut-off step of shutting off light incident on the image pick-up system;

a detection step of detecting an output value of an electric signal output from each of the pixels a predetermined number of times for each pixel in a state that light incident on the image pick-up system is shut off;

10 an output value adding-up step of adding up the output values detected at the detection step for each pixel;

an average value calculation step of dividing the sum total of the output values added up at the output value adding-up step by the number of times the output value has been detected at the detection step to calculate an average value of the output values for each pixel; and

15 a storage step of storing a difference between a previously setup value and the average value calculated at the average value calculation step for each pixel as the black reference data.

2. The black reference data calculation method according to claim 1, wherein the output value detection step is to detect the output value 100 times or more.

3. An image reader comprising:

a light source for applying light to an original;

an image pick-up system including a plurality of pixels

5 each for receiving light from the original and outputting an electric signal responsive to the received light amount;

a detector for detecting an output value of the electric signal output from the image pick-up system a predetermined number of times in a state that the light source is shut off;

10 an average value difference calculator for finding an average value of the output values detected by the detector for each pixel and calculating a difference between the average value for each pixel and a previously setup value as an average value difference; and

15 a storage section for storing the setup value and the average value difference for each pixel.

4. The image reader according to claim 3, wherein the storage section has a first storage section for storing the setup value and a second storage section for storing the average value difference for each pixel.

5. The image reader according to claim 3, wherein the detector detects the output value of the electric signal output from each of the pixels 100 times or more.